

CLAIMS

WHAT IS CLAIMED IS:

1. A method for varying the power consumption of loads having a capacitive input on an AC voltage power supply system by connecting and disconnecting, at the system frequency, the system power supply in each system half-cycle, in that
 - a) as long as the system power supply is disconnected, a current path bridging the load inputs is created, and in that,
 - b) when the system power supply is connected, a smoothing capacitor is charged by means of a converter until the voltage across the smoothing capacitor of the load reaches a predetermined maximum value.
2. The method as claimed in claim 1, in that the converter is a step-up converter.
3. The method as claimed in claim 1 or 2, in that the maximum value is reduced when the time at which the system power supply is in each case connected falls below a predetermined minimum value.
4. The method as claimed in claim 1, 2 or 3, in that, when the characteristic of the system power supply applied to the load is constant, the converter is permanently deactivated.
5. A circuit for carrying out the method as claimed in one of claims 1 to 4, in that it has a current path which can be connected and disconnected and which is designed to bridge the inputs of a load, and in that a control element is provided which is designed to detect the voltage across the smoothing capacitor of a load

and its system power supply and to connect and disconnect the current path.

6. The circuit as claimed in claim 5, in that it is connected to in each case one system-side input of a rectifier via a first and a second resistor.

7. The circuit as claimed in either of claims 5 and 6, in that it is designed to evaluate a signal produced by the system power supply and to produce a signal for controlling the power consumption of the load.

8. The circuit as claimed in one of claims 5 to 6, in that it has a step-up converter, the current path being guided via the inductor of the step-up converter and a transistor of the step-up converter which can be controlled by the control element, and the step-up converter being designed to operate, once the system power supply has been applied to the load, until the voltage across the smoothing capacitor of the load reaches a predetermined maximum value.

9. The circuit as claimed in one of claims 5 to 8, in that it has an interface circuit connected upstream of it which is designed to short-circuit the inputs of the load upstream of the current path and the inductor and thus to bypass the current path and the inductor as long as no power is being supplied to the load.

10. The circuit as claimed in one of claims 4 to 9, in that the current path is designed such that, during operation of the step-up converter, it carries on average over time a current which corresponds at least to a holding current required for maintaining the closed state of a triac in the system power supply.

11. An electrical ballast for a lamp having the control circuit as claimed in one of claims 4 to 9 for operation using a phase-gating dimmer.